

### REMARKS

Reconsideration of the present application is respectfully requested.

In the present Office Action, claims 14, 15, 23-25, 54 and 55 stand allowed.

Claims 41, 42, 52, 53 and 56 were objected to as being dependent upon rejected base claims but were deemed to recite allowable subject matter. Claims 28-32 and 51 were rejected under 35 U.S.C. § 102(b) based on U.S. Patent no. 5,140,745 of McKenzie ("McKenzie"). Claim 43 was rejected under 35 U.S.C. § 102(e) based on U.S. Patent no. 6,198,634 of Armezzani et al. ("Armezzani"). Claims 5 and 50 were rejected under 35 U.S.C. § 103(a) based on Armezzani in view of U.S. Patent no. 6,335,491 of Alagaratnam et al. Claims 28 and 53 were objected to based on informalities.

In this amendment, claims 41 and 52 have been canceled; claims 5, 28, 42 and 43 have been amended; and claims 57 and 58 are new. No new matter has been added.

#### Claim Objections

The amendment to claim 28 is believed to overcome the objection to that claim.

The amendment to claim 5 is believed to overcome the objection to claim 53.

#### Claim Rejections

The Office indicated that claims 41 and 52 would be allowable if rewritten in independent form, including all of the limitations of the base claim and any intervening claims. Accordingly, Applicants have amended claim 5 to incorporate the limitations of

claim 52, and claim 43 to incorporate the limitations of claim 41. Note that certain limitations have been deleted from claims 5 and 43 and are now present in new claims 57 and 58. Applicants believe that the deleted limitations were not necessary for patentability, and that claims 5 and 43 as currently amended, are patentable over the cited art.

Regarding claim 29, Applicants respectfully traverse the rejection based on McKenzie. Claim 29 recites:

29. An interposer comprising:
- a circuit board substrate member having a first surface and a second surface parallel to each other, the substrate further having an edge perpendicular to the first surface and the second surface;
  - a first plurality of conductive contact pads on the first surface;
  - a second plurality of conductive contact pads on the second surface; and
  - a plurality of recessed channels in the edge of the substrate member, extending from the first surface to the second surface, each of the recessed channels having a conductive material therein to form a conductive path between one of the first plurality of contact pads and one of the second plurality of contact pads; and
  - a first plurality of grooves **in the first surface** between the contact pads on the first surface.  
(Emphasis added.)

McKenzie does not disclose or suggest such a device, and in particular, McKenzie fails to disclose or suggest a first plurality of grooves in the first surface between the contact pads on the first surface. The Examiner contends that McKenzie discloses this feature in the form of “grooves 36 defined between each of the conductive structures 34, hence, between the contact pads on the first (upper) surface (Fig. 3B; col.

3; 19-12).” Office Action, p. 4. However, the grooves 36 in McKenzie are not in the “first surface” (i.e., in the top or bottom surface) of the substrate member, they are in the edge of the substrate member. McKenzie states, “[G]rooves 36 are defined between each of the traces 34 on the side edge of the printed circuit board.” Col. 3, lines 11-12 (emphasis added). Thus, while the grooves 36 in McKenzie extend from the top surface to the bottom surface of the circuit board, that is completely different from a configuration in which the grooves are in the top surface or in the bottom surface (which is not disclosed in McKenzie).

The Examiner must remain consistent, throughout the rejection of the claim, in how the Examiner maps claim terms to features disclosed in the reference. In the present Office Action, the Examiner reads the “first surface” and “second surface” in claim 29 on the top and bottom surfaces, respectively, of the circuit board in Figure 3B of McKenzie. Therefore, an edge of the circuit board, in which grooves 36 are defined, cannot be considered the “first surface” of the substrate as recited in claim 29, in which the “first plurality of grooves” are located.

Therefore, claim 29 and all claims which depend on it are patentable over the cited art.

### Conclusion

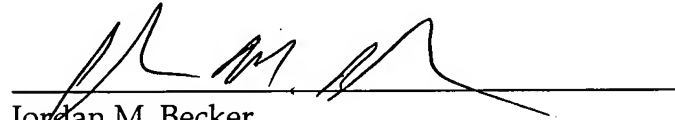
For the foregoing reasons, the present application is believed to be in condition for allowance, and such action is earnestly requested.

If any additional fee is required, please charge Deposit Account No. 02-2666.

Respectfully submitted,  
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3/2/04

  
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